NRCS Natural Resources Conservation Service

Minnesota

EQIP COMPREHENSIVE NUTRIENT MANAGEMENT PLAN (CNMP) REQUIREMENTS

Producers receiving USDA Environmental Quality Incentives Program (EQIP) funding for waste storage are required to develop and implement a Comprehensive Nutrient Management Plan (CNMP). A CNMP addresses handling, storage and land application of manure and wastewater; mortality disposal; silage leachate runoff control if required by law; soil and water conservation practices; and as requested by the producer feed management and uses of manure for other than land application. Implementation of most CNMP elements is required during the life of the EQIP contract. However animal mortality or silage leachate management systems can be phased in under subsequent EQIP contracts.

This fact sheet highlights EQIP CNMP requirements.

REQUIREMENTS

1. ***Livestock production and manure storage area evaluation and practices planned***

✓ Evaluation includes:
- Current storage system capacity for present or planned animal numbers
- Feedlot and other storage area runoff or leaching problems
- Current operation and maintenance activities for all livestock production system components
- Silage leachate problems identified by regulatory agencies
- Mortality disposal techniques

✓ Plans include:
- Collection, storage, transfer and/or treatment systems and equipment needed to eliminate identified problems.
- Operation and maintenance practices/activities for system components.
- Emergency response or action plan addressing fire, personal injury and manure storage, collection, treatment and application.

2. ***Evaluation of land receiving manure and practices planned***

✓ Evaluation includes:
- Field Nitrogen leaching and Phosphorus runoff potentials
- Calculations to determine acreage needed to adequately utilize manure nutrients
- Evaluation of erosion potentials on fields receiving land applications.

✓ Plans include:
- Management practices such as filter strips.
- Other soil and water conservation practices needed to reduce soil losses or runoff. **(All fields receiving manure from the facility will have sheet and rill soil losses controlled to 6 tons per acre per year or)**

3. ***Nutrient management plans***

✓ See the attached fact sheet and checklist.

4. ***Record of CNMP implementation*** **(similar to MPCA record keeping requirements)**.

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NUTRIENT MANAGEMENT REQUIREMENTS OF A COMPREHENSIVE NUTRIENT MANAGEMENT PLAN (CNMP)

Individuals with EQIP contracts addressing waste storage structures must fully implement a nutrient management plan by the last year of the EQIP contract. Implementation can be phased in over time on multi-year contracts.

1st Year Nutrient Management (Baseline Plan)

1. Develop realistic yield goals (average the latest five year's yields after dropping the lowest yielding year).

2. Sample soils for at a minimum pH, Organic matter (O.M.), Phosphorus (P), and potassium (K) and have analyzed at a soil testing lab certified by the Mn. Dept. of Agriculture (MDA). Existing soil tests no older than 3-4 years addressing these parameters are acceptable if from certified labs (nitrate tests are collected annually however).

3. Collect manure samples each time a storage structure is emptied for application and have analyzed for Total N, P_2O_5 and K_2O using procedures and laboratories recommended by MDA.

4. Apply manure uniformly and calibrate manure application equipment **at time of application**. Determine and record rates applied to fields.

5. Do not apply manure in in-field grassed waterways (unless a variance is granted).

6. Follow all state laws regarding manure applications and manure applications near sensitive features. These requirements include:
   a. Determining manure application rates based on crop nitrogen nutrient budgeting on most fields including fields adjacent to surface waters if those fields have filter strips.
   b. Determining manure application rates based on crop P_2O_5 removal rates on fields without filter strips adjacent to surface waters if those fields have Soil Test Phosphorus levels of over 21 PPM Bray 1(16 PPM Olsen). A single year rate can be based on crop nitrogen needs provided subsequent applications do not occur until excess P has been removed by succeeding crops.
   c. No applications in road ditches or within 25 feet of lakes, perennial and intermittent streams, off-field drainage ditches and public water wetlands. No traveling gun or center pivot manure applications within 300 feet of these features. No wintertime applications within 300 feet of these features. Inject or incorporate manure within 24 hours at other times of the year if a filter strip is not present on the field.
   d. No applications within 50 feet of water supply wells, mines, quarries, sinkholes receiving surface runoff, or other direct conduits to groundwater. Inject or incorporate manure applications within 24 hours on land upslope from and within 300 feet of these features.
7. Keep field specific records of crops, yields, and commercial fertilizer and manure applications (including rates, timing, nutrient content and method of application and incorporation).

Subsequent and Final Year Nutrient Management (Annual Plan)

Items 5-7 above and as appropriate 1 thru 4.

8. If NRCS is helping with plan development submit completed NRCS forms MN-CPA-40, 41, 42 and 43 by Aug. 1 if fall applications are being considered or by **Dec. 1** if only spring applications are planned.

9. Control ephemeral gully erosion and sheet, rill, and wind erosion to 6 tons per acre per year or less on all land receiving manure applications.

10. Determine crop N, P_2O_5 and K_2O nutrient needs using nutrient budgeting procedures (accounts for all sources of nutrients available to plants) and University of Minnesota (UofM) fertilizer recommendations as found in the most recent version of **BU-6240-GO Fertilizer Recommendations for Agronomic Crops in Minnesota** (or analogous crop specific bulletins).

11. On soils classified by NRCS as "frequently" flooded (floods 50-100 times in 100 years)
    a. Do not apply manure during usual peak flood periods
    b. Inject or incorporate manure within 2 days when applying at other times.

12. Do not fall apply commercial N fertilizer on:
    a. Soils n the textural classes of loamy sand and sand. Sidedress or split applications of commercial nitrogen fertilizer are preferred on these soils.
    b. Sensitive sites in southeastern Minnesota

13. Use sidedress or split applications of commercial N on irrigated crops.

14. Maintain a minimum separation of 15 inches between bottom of incorporated or injected manure and fractured bedrock or high water table.

15. Delay fall manure applications on coarse textured soils until after Nov. 1.

16. Do not apply solid or liquid manure on fields with sheet and rill soil losses greater than 4 tons/ac./ or 2 tons/ac./year respectively.

17. Inject or incorporate manure within 24 hours upslope from and within 300 feet of surface tile intakes.

19. Prior to **Aug. 1** certify that planned activities have been completed. NRCS form MN-CPA-046 can be used for certification.

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Comprehensive Nutrient Management Plan Component Checklist

Plan Components Required by MPCA Manure Management Plans and NRCS Nutrient Management and Comprehensive Nutrient Management Plans	
Photos or Maps	
Planned crops and rotation	
Field specific nitrogen and phosphorus budgets for planned crops	
Description and location of manure storage and handling system (including description of manure testing practices and manure applicator calibration procedures)	
Amount of manure and manure nutrients generated during planning period (annually)	
Field specific manure and fertilizer nitrogen and phosphorous rates for planned crops (include acreage of fields receiving applications)	
Soil and manure testing practices and analysis results used to develop manure and fertilizer rate recommendations	
Field specific manure application methods and timing	
Location of areas to receive manure applications	
Listing of areas to receive winter-time manure applications	
Location of sensitive features	
Field specific protective measures for sensitive features including soil and water conservation practices	
Needed conservation practices on fields receiving winter-time manure applications	
Planned cover crop (as appropriate)	
Management practices to minimize P movement (as appropriate)	
Management practices to minimize Soil Test Phosphorus buildup (as appropriate)	
Operation and Maintenance guidance	
Recordkeeping	
Additional Plan Components for NRCS Nutrient Management and Comprehensive Nutrient Management Plans	
Soil Survey map and legend	
N, P, and K nutrient budget for the rotation	
Estimate of acres needed to apply manure at N and P based rates	
Realistic yield goals	
Field specific potassium (potash) budget and planned rate for crop	
Fertilizer application methods and timing	
Field nitrogen and phosphorous loss risk assessments (as appropriate)	
Additional Components for NRCS Comprehensive Nutrient Management Plans	
Information needed to evaluate the existing manure storage and handling system	
Required operation permits and operator and applicator certifications	
Emergency Response Plan	
Dead animal disposal technique (as appropriate)	
Use of manure other than as a fertilizer (as appropriate)	
Feeding to reduce excreted P and N (optional consideration)	